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ABSTRACT OF THE DISCLOSURE

A novel light-emitting device includes a sapphire substrate with a light-emitting layer comprising  $\text{In}_x\text{Ga}_{1-x}\text{N}$ , where the critical value of the indium mole fraction  $x$  is  
5 determined by a newly derived relationship between the indium mole fraction  $x$  and the wavelength  $\lambda$  of emitted light.